

# NEWS BRIEFING

## ● POLICY

**Physics cutbacks:** The funding body that distributes the bulk of UK research money for large-scale physics and astronomy announced drastic cuts on 16 December, in a bid to solve its £40-million (US\$64-million) budget gap (see *Nature* 462, 396; 2009). Researchers responded with disappointment and anger after the Science and Technologies Facilities Council announced a 10% across-the-board cut to grants and a gradual 25% reduction in the number of students and researchers — at present about 280 — that it directly supports with fellowships. A five-year plan also calls for a “managed withdrawal” from more than two dozen individual projects, and £71 million in cuts to ongoing projects. See [go.nature.com/1mn2zW](http://go.nature.com/1mn2zW) for more.

**Joint Mars plan:** Member states of the European Space Agency (ESA) have formally agreed to team up with NASA to explore Mars in the latter half of the next decade. At an agency council meeting on 16–17 December in Paris, France, ESA's council gave the go-ahead to contribute €850 million (US\$1.2 billion) to two missions in the joint-agency ‘ExoMars’ programme (see *Nature* 460, 675; 2009). The first is an orbiter to detect trace gases, allied with a small lander, to be launched in 2016, the second consists of two larger planetary rovers to be launched in 2018.

**Neutron rivals team up:** Hungary has become the fourteenth country to join the Scandinavian-led consortium to build the European Spallation Source (ESS) in Lund, Sweden. The €1.5-billion (US\$2.2-billion) ESS will generate high-power neutron beams by firing protons at a heavy-metal target. Hungary had promoted its own rival site for the neutron facility, but earlier this year several key nations threw their support behind the Lund site (see *Nature* 459, 626;



NOAA/NSF

## OCEAN VOLCANO CAUGHT ON FILM

Footage of a volcanic eruption nearly 1,200 metres under the sea was unveiled on 17 December at a meeting of the American Geophysical Union (AGU) in San Francisco, California. The high-definition film of the West Mata volcano in the western Pacific is one of the first times that lava has been caught flowing on the deep sea floor. Jason, the remotely operated vehicle that took the pictures, “actually reached into the molten lava and pulled out a gob” of freshly erupted rocks, says lead researcher Joseph Resing of the Pacific Marine Environmental Laboratory in Seattle, Washington. See [go.nature.com/sc837n](http://go.nature.com/sc837n) for more, and [go.nature.com/Q2ZovD](http://go.nature.com/Q2ZovD) for all of *Nature's* reports from the AGU meeting.

2009). Spain, another rival bid, joined the Swedish project in June. Colin Carlile, director of the ESS project, says the next stage — a three-year design review — will begin in 2010.

### Innovation clusters named:

The European Institute of Innovation & Technology last week named the clusters of European centres that will host its first three ‘knowledge innovation communities’ (KICs). The scheme is meant to foster greater research collaboration between academia and industry across Europe. Focusing on climate change, sustainable energy and information technology, each of the three KICs will get €3 million (US\$4.3 million) in start-up funding and will try to win more support from national and European funding programmes, and private sources.

## ● BUSINESS

**Solar going public:** Solyndra, a photovoltaics manufacturer based in Fremont, California, filed with the US Securities and Exchange Commission on 18 December for an initial public offering. The firm wants to raise up to US\$300 million. Founded in 2005, Solyndra makes thin-film cylindrical modules for use in solar arrays on commercial roof-tops. In March 2009, it was granted a \$535-million loan guarantee from the US government to expand manufacturing capacity.

**Carbon permits fall:** Reacting to the climate accord announced in Copenhagen (see page 966), prices for permits to emit a tonne of carbon dioxide (for delivery in 2010) closed at a 6-month low of €12.45 (US\$17.78) on the European Climate Exchange

## SOUND BITES

### “Meaningful and unprecedented.”

US President Barack Obama puts a positive face on the Copenhagen accord. See page 966 for more.

on 21 December. This is well down on prices that were solidly above €14 in the week before the conference. Traders think that the uncertainty associated with the accord will see transaction volumes and prices continue to slide.

**Vaccine hire:** Julie Gerberding, who was director of the US Centers for Disease Control and Prevention in Atlanta, Georgia, during 2002–09, has been hired to head the vaccines unit of pharmaceutical giant Merck & Co. She stepped down from the health agency when US President Barack Obama took office on 20 January 2009.

**RESEARCH**

**Stem-cell gap:** The human embryonic stem-cell lines in wide use among researchers are strikingly lacking in population diversity, according to a report published last week (J. T. Mosher *et al. N. Engl. J. Med.* doi:10.1056/NEJMc0910371; 2009).

University of Michigan scientists analysed the genetic ancestry of 47 commonly used lines — including 22 approved for US government funding earlier this month. They found that 31 were of exclusively northern and western European origin, 2 were Asian, and the rest had elements of southern European or Middle Eastern ancestry, or both. None was of African origin.

**Geologist acquitted:** A Swiss court on 21 December cleared geologist Markus Häring of any wrongdoing relating to small earthquakes caused by an

**NUMBER CRUNCH**  
**20%**

**The contribution of aircraft vapour trails to warming in the Arctic since temperature records began.**

*Source: Mark Jacobson, Stanford University, Palo Alto, California. American Geophysical Union meeting in San Francisco, California. See go.nature.com/Txwdhf for more.*

innovative geothermal drilling project in Basel, Switzerland, which he had led with the Geopower Basel consortium. He had not played down any risks and acted in accordance with the state of scientific knowledge at the time, the court said. The project was shut down on 10 December following a government study into the economic damage it had caused (see also *Nature* 462, 848–849; 2009).

**Airborne telescope on test:** A decade behind schedule, the Stratospheric Observatory for

Infrared Astronomy (SOFIA) has finally been unshuttered. On 18 December, a door in the side of the Boeing 747 that houses the telescope was opened during a flight (pictured) — exposing the 2.5-metre telescope to the atmosphere for two minutes. An audit earlier this year (see *Nature* 458, 693; 2009) found that costs of the project had more than tripled from the original estimate of US\$265 million. NASA, which funds SOFIA together with the German Aerospace Center, says scientists' first opportunity to use the telescope could come in spring 2010.



**Autism alert:** The prevalence of autism in the United States has grown dramatically, to 1 in 110 children, according to an 18 December report by the US Centers for Disease Control and Prevention in Atlanta, Georgia. The numbers, published in *Morbidity and Mortality Weekly Report*, reflect a 57% surge in cases of autism spectrum disorder (ASD) in 8-year-olds between 2002, the last survey year, and 2006. "Although improved ascertainment accounts for some of the prevalence increases documented... a true increase in the risk for children to develop ASD symptoms cannot be ruled out," the authors wrote.

**THE WEEK AHEAD**

**1 JANUARY 2010**  
**Spain assumes a six-month presidency of the European Union.**

**3-7 JANUARY 2010**  
**The American Astronomical Society meets in Washington DC.**  
▶ <http://aas.org/meetings/aas215>

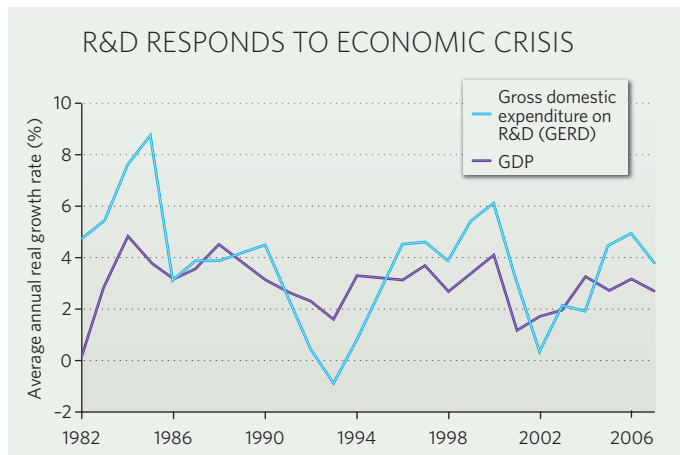
**3-7 JANUARY 2010**  
**The Society for Integrative and Comparative Biology meets in Seattle, Washington.**  
▶ [www.sicb.org/meetings/2010](http://www.sicb.org/meetings/2010)

**FUNDING**

**Neglected diseases funding:** Spending on research and development into neglected diseases "ground to a standstill" in 2008, according to the second edition of the report *Global Funding of Innovation for Neglected Diseases*, published by the George Institute for International Health in Sydney, Australia. Donors, governments and industry combined spent US\$2.96 billion on new products for these diseases. Although that was around 4% up on 2007, most of this rise was due to funds from the Bill & Melinda Gates Foundation, based in Seattle, Washington, which increased its spending by 36.5% to \$617 million. This masked an overall trend of freezes or slight falls in support from rich countries and most donors.

**BUSINESS WATCH**

Preliminary data from US stock markets suggest that companies have already reduced their investments in research and development (R&D) following the economic crisis. More than 2,000 companies that filed quarterly reports with the US Securities and Exchange Commission reported an average reduction of 6.6% in their planned R&D spending in the first quarter of 2009. The data are contained in the Organisation for Economic Co-operation and Development's *OECD Science, Technology and Industry Scoreboard 2009*, officially released on 14 December. Vincenzo Spiezia, a senior economist at the OECD, says actual spending may drop even lower. Historically, R&D spending lags behind gross domestic product (GDP; see chart). Spiezia thinks that the lowest point for R&D has not yet been reached, and notes that only a small proportion of the economic-stimulus packages went directly to bolster research. The OECD also noted a huge drop in venture-capital investment in the United States — another indicator of dulled R&D prospects.



SOURCE: OECD

NASA/C. THOMAS